

## REMARKS

In the Office Action dated December 17, 2003, claims 7-13 were rejected under 35 U.S.C. §102(e) as being anticipated by Nahaliel et al.

Independent claim 7 has been amended to more specifically state that  
5 the detector elements in a first region of the columns of the radiation detector, including at least one entire column, are connected to a larger number of the electronic elements than the detector elements in a second region of the columns of the detector comprising the same number of columns as the  
10 aforementioned first region. This amendment is supported in the substitute specification at page 3, lines 19-22.

This arrangement of the detector elements and the electrical connection to the electronic elements results in a CT device having a multi-line detector system in which the read electronics has a smaller number of electronic elements compared to the number of detector elements, but despite  
15 this reduced number of electronic elements, a high resolution still can be achieved with the inventive detector system.

In the CT device disclosed and claimed in the present application, the detector system is divided not only into regions having a different resolution in the direction of the system axis (the z-direction), but also in the  $\Phi$ -direction.  
20 As shown in Figure 4 of the present application, this means that not only several lines 6 of the detector array can be combined to vary the slice thickness, but also several columns 7 can be connected in different regions (designated I, II and II' in Figure 4) to a different number of electronic elements. In the example represented by Figure 4, this means that in the  
25 middle region I of detector columns, these columns are connected to a larger number of electronic elements than in the outer regions II and II' of columns. This allows a higher resolution of the image in the middle region without changing the total number of electronic elements.

The Nahaliel et al. reference, by contrast, teaches only combining  
30 several *lines* of the detector in order to vary the slice thickness of the detector. This is described at column 3, lines 14-21, column 5, lines 1-4 of the Nahaliel et al. reference. Figure of the Nahaliel et al. reference shows one column of

the detector in which adjacent detector elements can be combined and connected only to one electronic component. This, however, is a combination of different *lines* of the detector to achieve different slice thicknesses. The Nahaliel et al. reference does not disclose combining *columns* in the manner set forth in claim 1 of the present application, so that a first region of the columns is connected to a larger number of electronic components than is a second region of the columns.

The Nahaliel et al. reference, therefore, does not disclose all of the elements of claim 7 of the present application as arranged and operating in that claim, and therefore does not anticipate claim 7, or any of claims 6-13 depending therefrom.

Moreover, Applicants submit separate arguments in support of the patentability of claims 8, 9 and 10.

With regard to claim 8, the only figure in the Nahaliel et al. reference in which several columns of the detector are shown is Figure 2. Figure 2 of the Nahaliel et al. reference, however, does not show the connections of the detector elements to electronic elements. All of the subsequent figures in the Nahaliel et al. reference show only a single column which, in every figure, has detector elements which are connected to electronic elements (for example, elements 94 through 100 in Figure 4). Therefore, the Nahaliel et al. reference does not disclose any embodiment wherein at least one of the columns is not connected to an electronic element, as set forth in claim 8.

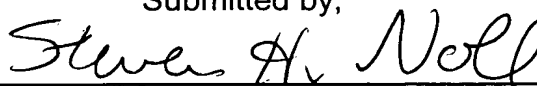
Similar arguments apply to the subject matter of claims 9 and 10, which state that additional values are generated in the second region of columns, wherein the columns are connected to a smaller number of electronic elements than in the other region, by interpolation from the measured values of the electronic components connected to the detector elements in the second region, or by extrapolation from the measured values of the electronic components connected to the detector elements in the first region.

Other references were generally cited but were not specifically relied upon as a basis for rejecting any claim of the application. A detailed distinguishing of the subject matter of the claims of the application over the

teachings of those references therefore is not seen to be necessary at this time. Applicants submit, however, that all claims of the application are patentable over the teachings of all of the references of record, taken singly or in combination.

5 All claims of the application are therefore submitted to be in condition for allowance, and early reconsideration of the application is respectfully requested.

Submitted by,

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